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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER	
CHAU, COREY P	

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 10/685,034	**Applicant(s)** THIEL, JAMES	
	Examiner Corey P. Chau	**Art Unit** 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 20 September 2005.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-38 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-38 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

2. Claim 9 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

3. Claim 16 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

4. Claim 21 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

5. Claim 28 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

6. Claim 35 is objected to because of the following informalities: on lines 1-2, recites "the main speaker characteristic", which should be replaced with "the intrinsic characteristic of the main speaker". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. Claims 1, 3-8, 10-15, 17-20, 22-27, 29-34, and 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 discloses "an intrinsic characteristic of the main speaker, wherein the intrinsic characteristic is independent of output of the main speaker that may be obtained with any particular input". Claim 3 discloses the user adjustable variable comprises a low-frequency cutoff frequency. Claim 4 discloses the user adjustable variable comprises a low-frequency damping factor. Claim 5 discloses the user adjustable variable comprises a speaker sensitivity factor. Claim 6 discloses the user adjustable variable comprises an enclosure type. Claim 7 discloses the user adjustable variable comprises a gain factor. Applicant has not clearly disclosed how adjustable variable such as a low-frequency cutoff frequency, low-frequency damping factor, a speaker sensitivity factor, an enclosure type, and a gain factor are different from equalization parameters. Therefore, it is unclear to the Examiner how adjusting a low-frequency cutoff frequency, low-frequency damping factor, a speaker sensitivity factor, an enclosure type, and a gain factor does not change an output of the main speaker (providing information distinguishing how changing a user-adjustable variable being purely indicative of an intrinsic characteristic of the main speaker effects the main speaker compare to equalization parameters will provide a clearer difference between the invention and prior art). Claims 8 and 10-14 are rejected for the same reasons stated above. Claims 15 and 17-19 are rejected for the same reasons stated above.

Claims 20 and 22-26 are rejected for the same reasons stated above. Claims 27 and 29-33 are rejected for the same reasons stated above. Claims 34 and 36-38 are rejected for the same reasons stated above.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1-38 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5617480 to Ballard et al. (hereafter as Ballard).

11. Regarding Claim 1, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses a system for adjusting the frequency response of subwoofer systems (i.e. digital signal processing (DSP) frequency response

modification)(column 1, lines 15-24; column 2, lines 26-45), wherein the subwoofer systems include a main speaker and a subwoofer (Fig. 3), wherein the subwoofer is distinct from the main speaker, the system comprising: a user interface (16) configured to receive at least one user-adjustable variable (i.e. PC software preferably provides the Graphical User Interface (GUI) to control the entire design system)(Figs. 4, 5, and 6), the user-adjustable variable being purely indicative of an intrinsic characteristic of the main speaker, wherein the intrinsic characteristic is independent of output of the main speaker that may e obtained with any particular input (crossover,delay, LR,RF,F,LR,RR,R) (i.e. a plurality of first icons represent a plurality of frequency response characteristics. A plurality of second icons in the form of scroll tabs representing a range of design parameters are visually represented to the user as interface elements)(Figs 4, 5, and 6; column 2, lines 54-67; column 5, line 51 to column 6, line 37); and a compensation circuit (48) configured to produce a desired subwoofer signal (44,46) from an input signal (32,34) in response to the user-adjustable variable (Figs. 3, 4, 5, and 6; column 2, lines 46-53; column 8, lines 50-61; column 9, lines 5-29; column 9, line 52 to column 10, line 2).

12. Regarding Claim 2, Ballard discloses the main speaker characteristic comprises low-frequency characteristic of a main speaker (Figs. 3; 4, and 5; column 5, lines 13-22).

13. Regarding Claim 3, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprises a low-frequency cutoff frequency (Fig. 6; column 9, lines 5-15).

14. Regarding Claim 4, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprises a low-frequency damping factor (Figs. 4, 5, and 6; column 9, lines 5-15).

15. Regarding Claim 5, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprises a speaker sensitivity factor (Figs. 4, 5, and 6; column 9, lines 5-15).

16. Regarding Claim 6, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprises an enclosure type (column 9, lines 5-15).

17. Regarding Claim 7, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprises a gain factor (Figs. 4, 5, and 6; column 9, lines 5-15).

18. Claim 8 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

19. Claim 9 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.

20. Claim 10 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

21. Claim 11 is essentially similar to Claim 4 and is rejected for the reasons stated above apropos to Claim 4.

22. Claim 12 is essentially similar to Claim 5 and is rejected for the reasons stated above apropos to Claim 5.

23. Claim 13 is essentially similar to Claim 6 and is rejected for the reasons stated above apropos to Claim 6.

24. Claim 14 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.

25. Claim 15 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

26. Claim 16 is essentially similar to Claim 2 and is rejected for the reasons stated above apropos to Claim 2.

27. Claim 17 is essentially similar to Claim 3 and is rejected for the reasons stated above apropos to Claim 3.

28. Claim 18 is essentially similar to Claim 4 and is rejected for the reasons stated above apropos to Claim 4.

29. Claim 19 is essentially similar to Claim 7 and is rejected for the reasons stated above apropos to Claim 7.

30. Regarding Claim 20, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses a system for adjusting the frequency response of subwoofer systems (i.e. digital signal processing (DSP) frequency response modification)(column 1, lines 15-24; column 2, lines 26-45), wherein the subwoofer system include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker (Fig. 3), the system comprising: a user interface (16) configured to receive at least a user-adjustable variable (i.e. PC software preferably provides the Graphical User Interface (GUI) to control the entire design system)(Figs. 4, 5, and 6),

the user-adjustable variable comprising: a first variable that is purely indicative of a main speaker characteristic (crossover,delay, LR,RF,F,LR,RR,R) (i.e. a plurality of first icons represent a plurality of frequency response characteristics. A plurality of second icons in the form of scroll tabs representing a range of design parameters are visually represented to the user as interface elements)(Figs 4, 5, and 6; column 2, lines 54-67; column 5, line 51 to column 6, line 37); and a second variable that is not purely indicative of a main speaker characteristic (S1,S2,ALL)(Figs. 4-6); and a compensation circuit (48) configured to produce a desired subwoofer signal (44,46) from an input signal (32,34) in response to the user-adjustable variable (Figs. 3, 4, 5, and 6; column 2, lines 46-53; column 8, lines 50-61; column 9, lines 5-29; column 9, line 52 to column 10, line 2).

31. Regarding Claim 21, Ballard discloses the main speaker characteristic comprises a low-frequency characteristic of a main speaker (Figs. 3; 4, and 5; column 5, lines 13-22).

32. Regarding Claim 22, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprise a low-frequency cutoff frequency (Fig. 6; column 9, lines 5-15).

33. Regarding Claim 23, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprise a low-frequency damping factor (Figs. 4, 5, and 6; column 9, lines 5-15).

34. Regarding Claim 24, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprise a speaker sensitivity factor (Figs. 4, 5, and 6; column 9, lines 5-15).

35. Regarding Claim 25, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprise an enclosure type (column 9, lines 5-15).

36. Regarding Claim 26, as best understood with regards to the 112, 2nd problem mentioned above, Ballard discloses the user adjustable variable comprise a gain factor (Figs. 4, 5, and 6; column 9, lines 5-15).

37. Claim 27 is essentially similar to Claim 20 and is rejected for the reasons stated above apropos to Claim 20.

38. Claim 28 is essentially similar to Claim 9 and is rejected for the reasons stated above apropos to Claim 9.

39. Claim 29 is essentially similar to Claim 10 and is rejected for the reasons stated above apropos to Claim 10.

40. Claim 30 is essentially similar to Claim 11 and is rejected for the reasons stated above apropos to Claim 11.

41. Claim 31 is essentially similar to Claim 12 and is rejected for the reasons stated above apropos to Claim 12.

42. Claim 32 is essentially similar to Claim 13 and is rejected for the reasons stated above apropos to Claim 13.

43. Claim 33 is essentially similar to Claim 14 and is rejected for the reasons stated above apropos to Claim 14.

44. Claim 34 is essentially similar to Claim 20 and is rejected for the reasons stated above apropos to Claim 20.

45. Claim 35 is essentially similar to Claim 16 and is rejected for the reasons stated above apropos to Claim 16.

46. Claim 36 is essentially similar to Claim 17 and is rejected for the reasons stated above apropos to Claim 17.

47. Claim 37 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

48. Claim 38 is essentially similar to Claim 19 and is rejected for the reasons stated above apropos Claim 19.

49. Claim 1, 8, 15, 20, 27, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6674864 to Kitamura

50. Regarding Claim 1, as best understood with regards to the 112, 2nd problem mentioned above, Kitamura discloses a system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker (Figs. 1 and 3), the system comprising: a user interface (12) configured to receive at least one user-adjustable variable, the user-adjustable variable being purely indicative of an intrinsic characteristic of the main speaker, wherein the intrinsic characteristic is independent of

output of the main speaker that may e obtained with any particular input (column 2, lines 16-32); and a compensation circuit (14) configured to produce a desired subwoofer signal from an input signal (22) in response to the user-adjustable variable (column 4, lines 16-67).

51. Claim 8 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos Claim 1.

52. Claim 15 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos Claim 1.

53. Regarding Claim 20, as best understood with regards to the 112, 2nd problem mentioned above, Kitamura discloses a system for adjusting the frequency response of subwoofer systems, wherein the subwoofer system include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker (Figs. 1 and 3), the system comprising: a user interface (12) configured to receive at least a user-adjustable variable, the user-adjustable variable comprising: a first variable that is purely indicative of a main speaker characteristic (column 4, lines 16-32); and a second variable that is not purely indicative of a main speaker characteristic (i.e. select a channel such as subwoofer channel); and a compensation circuit (14) configured to produce a desired subwoofer signal from an input signal (22) in response to the user-adjustable variable (column 4, lines 16-67).

54. Claim 27 is essentially similar to Claim 20 and is rejected for the reasons stated above apropos Claim 20.

55. Claim 34 is essentially similar to Claim 20 and is rejected for the reasons stated above apropos Claim 20.

Response to Arguments

56. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

57. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

58. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 11, 2005
CPC

HUYEN LE
PRIMARY EXAMINER